**Combustion (Level 1) examiners tips: Read these please!**

|  |  |
| --- | --- |
| **Complete combustion** | **Incomplete combustion** |
| plenty of oxygen present | limited oxygen present |
| invisible flame | yellow flame, **black residue from flame** |
| CO2 and H2O produced | **CO and C and H2O produced** |
| **a lot of energy released** | **little energy released** |

RTQ2 be sure to read the question twice

if asked to compare/contrast - do so! see summary below

|  |  |  |
| --- | --- | --- |
|  | **Health** | **Environmental** |
| **carbon particles**  **or**  **soot**  **or**  **C** | • can cause respiratory problems, particles irritate the lungs, particularly bronchioles and alveoli  *eg asthma and lung cancer*  • can cause cardiovascular problems, particles get into the arteries and clog them  *eg heart disease* | • can coat buildings with a black residue  • can scatter and block solar radiation, reducing the efficiency of photosynthesis |
| **carbon monoxide**  **or**  **CO** | • toxic gas which combines with haemoglobin in the blood, prevents oxygen being carried around the body, resulting in death | *CO is quickly converted to CO2 in the atmosphere* |
| **carbon dioxide**  **or**  **CO2** |  | • a greenhouse gas, causes heat energy to be trapped on Earth, resulting in climate change, melting of ice caps, sinking of Pacific islands  • an acidic gas which increases the acidity of the oceans resulting in damage to coral *eg at the Great Barrier Reef* |

for MERIT or EXCELLENCE you must explain an effect such as climate change or incomplete combustion

**Also…”don’t be daft”**

hydrocarbons contain....believe it or not...HYDROGEN + CARBON only

ozone depletion is a completely DIFFERENT thing to the greenhouse effect, different!

so the hole in the ozone layer is not, NOT, not the same as global warming

tell you what...DON'T EVEN MENTION the Ozone hole in your Level 1 Chemistry exam

bear in mind that the relatively new term for global warming is “CLIMATE CHANGE”

carbon DIOXIDE is NOT poisonous

rainwater is carbonic acid (same acid in soft drinks), NO carbonic acid is NOT harmful

the process of photosynthesis is very, very DIFFERENT to respiration

DON'T FORGET your observations alongside your chemical test information

one observation is no good, you must provide initial AND final observations

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